OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/910,430

DATE: 08/01/2001
TIME: 14:52:43

Input Set : A:\VANM229-001CP1seq.txt
Output Set: N:\CRF3\08012001\I910430.raw

```
 3 <110> APPLICANT: Godfroi, Edmond
 4        Bollen, Alex
 5        Leboulle, Gerard
 7 <120> TITLE OF INVENTION: IDENTIFICATION AND MOLECULAR CHARACERIZATION OF
 8        PROTEINS, EXPRESSED IN THE IXODES RICINUS SALIVARY
 9        GLANDS
11 <130> FILE REFERENCE: VANM229.001CP1
```
C--> 13 `<140> CURRENT APPLICATION NUMBER: US/09/910,430`
C--> 14 `<141> CURRENT FILING DATE: 2001-07-19`
```
16 <150> PRIOR APPLICATION NUMBER: PCT/BE00/00061
17 <151> PRIOR FILING DATE: 2000-06-06
19 <150> PRIOR APPLICATION NUMBER: GB 9913425.6
20 <151> PRIOR FILING DATE: 1999-06-09
22 <160> NUMBER OF SEQ ID NOS: 34
24 <170> SOFTWARE: FastSEQ for Windows Version 3.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 194
28 <212> TYPE: DNA
29 <213> ORGANISM: Ixodes ricinus
31 <400> SEQUENCE: 1
32 ataccttcca cttgtagccc ttcctcatcc gatatggtga cggatgccat tgcatcctcg 60
33 tcgtggaaga ggtcctcttc taaataagac ccatccatat atgtgtgttt gcgaatgccg 120
34 tcgacgtagc tcctgactag aaactcgtcg gctaggacag aacttttctt caggtttagc 180
35 gtaatgtcct cgtt                                                   194
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 607
40 <212> TYPE: DNA
41 <213> ORGANISM: Ixodes ricinus
43 <220> FEATURE:
44 <221> NAME/KEY: misc_feature
45 <222> LOCATION: (1)...(607)
46 <223> OTHER INFORMATION: n = A,T,C or G
48 <400> SEQUENCE: 2
```
W--> 49 **taccngggaa tccaaaacca attttttattg gaacttccac gtcttcttca aggcggtggc 60**
```
50 acctctgcat ttatgaagtt cgtcttggca ttttattttt tgcttctttc attgcrgaac 120
51 tcgcaaatgc acttcccgtg cttgtcgcat ttcgccccaa aagcgcatgg cattccttcc 180
52 ggcagattaa cttttttcaaa ttcacggttc tgaaccaata atagatcgtg gcaatgtttg 240
53 tgctgtttgc gatttgcaaa ccagctgtag ccaccattgg actcaaaggt gcgcacaaca 300
```
W--> 54 **tggcgccgaa ctgtgaaaaa caaattaagg ctnctttgta ataacgctag tcttggtacg 360**
```
55 ccgttagagg tcgatgtcgc gcctcgcgat tgcaaagtca cttgcactta tcaagctcct 420
56 ggagaaaaat gggtgcaacg gggggatcag cgtttgtact tgcaaacatt tgtggagacg 480
57 gtaaaccwgt atttcgcgga actcagatgc tccagcgtga agctcgtctt aataaaagtt 540
```
W--> 58 **gtaaattcga gtatngatga agaactgaaa ttcgaggcat ttagaaacac cacgagaagc 600**
```
59 agcggaa                                                          607
62 <210> SEQ ID NO: 3
63 <211> LENGTH: 259
64 <212> TYPE: DNA
```

ENTERED

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/910,430

DATE: 08/01/2001
TIME: 14:52:43

Input Set : **A:\VANM229-001CP1seq.txt**
Output Set: **N:\CRF3\08012001\I910430.raw**

```
65  <213> ORGANISM: Ixodes ricinus
67  <400> SEQUENCE: 3
68  gatcctacgc ctgaaaatga gtgtccatcg tcttcacata gtgccacatt gtaattggta 60
69  caagctccat tttcgtcagc gctgtttgtt atgctgccgc ctacttttcc ttcggcactc 120
70  cataagttaa accctgtcat tataagtgtg attgccgtat ctcggctgaa tgggttccat 180
71  ttttctctta aataatcacg tgtccatatt ccatgtattg tgttcatgag tatgtgattc 240
72  tcatcgtata tcttcgcct                                            259
75  <210> SEQ ID NO: 4
76  <211> LENGTH: 170
77  <212> TYPE: DNA
78  <213> ORGANISM: Ixodes ricinus
80  <400> SEQUENCE: 4
81  ccactcgaaa atggaggctt tgaaacattt cagtacccct gtgaactctg gctttgcaat 60
82  gtaacagcaa aaacacttac agttgaaggg tgcagtgtca gacgctatgg aagttgcatc 120
83  cacgagcacr accctgatta ctactggcca cgttgctrtc cgggtcgtcc             170
86  <210> SEQ ID NO: 5
87  <211> LENGTH: 168
88  <212> TYPE: DNA
89  <213> ORGANISM: Ixodes ricinus
91  <400> SEQUENCE: 5
92  gtatgttacc atgtccaacc cggttattaa atacaccaag tcgtaggatt tgtaggcagc 60
93  tgcattgccc ttgacgtact ctctcaacgt tgccaaggac tcaggcccat aaatgtagtg 120
94  gggttgacct tgaactcttc gtaaaaagcg ttctttctcc gtcgtgag              168
97  <210> SEQ ID NO: 6
98  <211> LENGTH: 247
99  <212> TYPE: DNA
100 <213> ORGANISM: Ixodes ricinus
102 <400> SEQUENCE: 6
103 ccgaamataa aacttagtct caccaatata cgtttgccta acgcgaagga acaggcacaa 60
104 atatactacg agcacgacat tctcaagaac acggttcacg gagtgtggac gagaattcac 120
105 tcaaaatatc cgttccctga agatgaggga attacactga taatgacagg gtttgattta 180
106 tggagtgccg atttaactgt aggcggcacc ataacaaaca gcgctgagaa aagcggagct 240
107 tgtacga                                                        247
110 <210> SEQ ID NO: 7
111 <211> LENGTH: 261
112 <212> TYPE: DNA
113 <213> ORGANISM: Ixodes ricinus
115 <220> FEATURE:
116 <221> NAME/KEY: CDS
117 <222> LOCATION: (1)..(258)
119 <400> SEQUENCE: 7
120 atg cct ttt att ttc gtg gtg agc tta gtc att gtg gcc tgc atc gtg   48
121 Met Pro Phe Ile Phe Val Val Ser Leu Val Ile Val Ala Cys Ile Val
122  1               5                  10                  15
124 gta gac aca gcc aac cac aaa ggt aga ggg cgg cct gcg aag tgt aaa   96
125 Val Asp Thr Ala Asn His Lys Gly Arg Gly Arg Pro Ala Lys Cys Lys
126              20                  25                  30
128 ctt cct ccg gac gac gga cca tgc aga gca cga att ccg agt tac tac  144
129 Leu Pro Pro Asp Asp Gly Pro Cys Arg Ala Arg Ile Pro Ser Tyr Tyr
```

```
130        35              40              45
132 ttt gat aga aaa acc aaa acg tgc aag gag ttt atg tat ggc gga tgc  192
133 Phe Asp Arg Lys Thr Lys Thr Cys Lys Glu Phe Met Tyr Gly Gly Cys
134        50              55              60
136 gaa gga aac gaa aac aat ttt gaa aac ata act acg tgc caa gag gaa  240
137 Glu Gly Asn Glu Asn Asn Phe Glu Asn Ile Thr Thr Cys Gln Glu Glu
138 65                  70          75                  80
140 tgc aga gca aaa aaa gtc tag                                      261
141 Cys Arg Ala Lys Lys Val
142            85
145 <210> SEQ ID NO: 8
146 <211> LENGTH: 86
147 <212> TYPE: PRT
148 <213> ORGANISM: Ixodes ricinus
150 <400> SEQUENCE: 8
151 Met Pro Phe Ile Phe Val Val Ser Leu Val Ile Val Ala Cys Ile Val
152   1             5               10                  15
154 Val Asp Thr Ala Asn His Lys Gly Arg Gly Arg Pro Ala Lys Cys Lys
155            20              25              30
157 Leu Pro Pro Asp Asp Gly Pro Cys Arg Ala Arg Ile Pro Ser Tyr Tyr
158            35              40              45
160 Phe Asp Arg Lys Thr Lys Thr Cys Lys Glu Phe Met Tyr Gly Gly Cys
161        50              55              60
163 Glu Gly Asn Glu Asn Asn Phe Glu Asn Ile Thr Thr Cys Gln Glu Glu
164 65                  70          75                  80
166 Cys Arg Ala Lys Lys Val
167            85
171 <210> SEQ ID NO: 9
172 <211> LENGTH: 292
173 <212> TYPE: DNA
174 <213> ORGANISM: Ixodes ricinus
176 <400> SEQUENCE: 9
177 catcgmagcc atagtatatt ttgcacttgt cttccgtttc gtcgtagtag gaccgattcc 60
178 acattgtagt acaccagtca cttatatcct gcggcggtg cttgcatttg tcctgaacaa 120
179 atcttccaca gcgcttgtcg cacgcctcct gggaatagaa cgcgttctct cctccgcatc 180
180 tccatttgga atcatagaaa catctttcag tttgaatatt gtagcgataa taatcggtat 240
181 cagtttcttt gcatggtcct gggaggggtt tggcgcaggg gccgtattca gg          292
184 <210> SEQ ID NO: 10
185 <211> LENGTH: 270
186 <212> TYPE: DNA
187 <213> ORGANISM: Ixodes ricinus
189 <400> SEQUENCE: 10
190 ggtaatagtt gtcaaattcc attaatgtat cctgaaatgt gaccatatct ttgtttcccc 60
191 tgtaaaatct cataaaaggc tgtgtgtttt ccttaagaag tgtaacagcc acgatggtca 120
192 atctcacgga tggatgtgtg acacttttat atctcaggtt tgccgacatt gccattacag 180
193 ataaatagtt gataatttct ttcttgttat agttgtaagc agcgcatgtt gttgcatcaa 240
194 gcaccacatg cacttcaggc aatatggttt                                 270
197 <210> SEQ ID NO: 11
198 <211> LENGTH: 316
```

RAW SEQUENCE LISTING   DATE: 08/01/2001
PATENT APPLICATION: US/09/910,430   TIME: 14:52:43

Input Set : A:\VANM229-001CPlseq.txt
Output Set: N:\CRF3\08012001\I910430.raw

```
199 <212> TYPE: DNA
200 <213> ORGANISM: Ixodes ricinus
202 <400> SEQUENCE: 11
203 agaaagcagt catattggcc atccacaggt cacaatggtt ctctccttga cctggcatcg 60
204 ggattcgaag tatggtgcag ttcacgtagt tggaatacaa cacgaaatgt gttcgttggt 120
205 acgccaatag gggttctcgc aaagaacata tcatttggag gaaggcgtag tccgtcgaga 180
206 tatcccaaaa ctagggtttc attgcgtgcg aaccaactgc ccccacttct gtatgtgtac 240
207 tgtaaggagt rgttgaacgg ygtcctcttt cccataacct tgaagttttc acactgcaga 300
208 ggattacctc tcaaaa                                                 316
211 <210> SEQ ID NO: 12
212 <211> LENGTH: 241
213 <212> TYPE: DNA
214 <213> ORGANISM: Ixodes ricinus
216 <400> SEQUENCE: 12
217 aaggtagcaa gggtggtagg ctttcctcac aaagagtctg gcttccgtga taaccatatc 60
218 cattcctcac cgtatacccg tcatccaacg tcaattgtgt tacaaggcag ataatgtcaa 120
219 aatggctctg gtccctataa tagtcggata atgtagaaat cgctccatgt ggccaaatag 180
220 atgttcctct ttcatactgt tttaacttta attgtaggtc cgcctcgttc tcgaggtatg 240
221 t                                                                241
224 <210> SEQ ID NO: 13
225 <211> LENGTH: 636
226 <212> TYPE: DNA
227 <213> ORGANISM: Ixodes ricinus
229 <220> FEATURE:
230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (1)...(636)
232 <223> OTHER INFORMATION: n = A,T,C or G
234 <400> SEQUENCE: 13
```

W--> 235 **ttccccnaat tggccttgcg anncttgcaa gtcgacncta gaggctccga agatggacag 60**
```
236 attgcgcatg aaatatttga aatcgagcag aatggtgatt ttaggagcga ttatattgtg 120
237 ccacccagtt tgaaagtgca agaacgcaca gtggtttacc gtaacaagta caccagagtt 180
238 cctgtaaatt ttaccgtcga agttgccatg ctgattgata agtatttata cwaggagttc 240
239 aagaacgaga gccacatcgt accgtacctg gctatgatac tgactttgat aaatctgagg 300
240 tatgccgaca cacatgaccc gtacatccag tttcttctca cacaagtgtt cgtggggaaw 360
241 wctggcgatc atatgggcca catgcccttc cgacgagcgt tcttgttcag gcgccggcat 420
242 tatgcgcagt ttaggcccaa tmacaccttc cacttgtaat tctccgttgt tggatagtgt 480
243 aagtgaggcc attgcatcag catcgtggaa gargccttcc tccaagtagg aaccgcccat 540
```
W--> 244 **ttaggtttgc tttcccaatc cgccaattta antttaaaa aaaattcccc ccccaaaaat 600**
```
245 taatttttt taaaggtgga ttgtgatttc tccgtt                           636
248 <210> SEQ ID NO: 14
249 <211> LENGTH: 432
250 <212> TYPE: DNA
251 <213> ORGANISM: Ixodes ricinus
253 <400> SEQUENCE: 14
254 gatcccaaaa gtgcccctgg arcgacggtt acatcatgag ctacgtcata aacttcaaaa 60
255 accacttcaa attttctccc tgctgtgtag aatcaattcg attcgtcgca cgagagcggg 120
256 actgcctcta caaagtcaat gccaaggatg ctgtaaaaag cctaatatct ctgcccggat 180
257 ttaggatatc gccaacgagt ttctgtcaat ttatgcatcc gctttaccgc ggtgtccata 240
258 gcgataagaa agcaggtctg tccgattgcg tacagacgtg tagaacggcc aaaaatcgac 300
```

RAW SEQUENCE LISTING   DATE: 08/01/2001
PATENT APPLICATION: US/09/910,430   TIME: 14:52:43

Input Set : A:\VANM229-001CP1seq.txt
Output Set: N:\CRF3\08012001\I910430.raw

```
259 gaggaggcta ccattcatgg attcacgcgg cacttgacgg ggttccttgc gacaagagaa 360
260 accccaagaa ggcctgcata aacgggaaat gcaccctcct taagagcatg ccccacagaa 420
261 cgtaccggga at                                                    432
264 <210> SEQ ID NO: 15
265 <211> LENGTH: 466
266 <212> TYPE: DNA
267 <213> ORGANISM: Ixodes ricinus
269 <400> SEQUENCE: 15
270 agggcgttct ttgcttyaca gggaacrgca tatgggccac gtgaccttcc aatgaccgct 60
271 ccaaatctgg cataggttga aytcgcaagt cgtggcgcag caggcctycc acattcactc 120
272 catcctcgtc ttttaggatg actgccgcca tttgttttgt atcgtggtac aggtgtttgt 180
273 tatggtccga gccgtcgaca taagtattga ccaacgatcg gccgaatgat tacggctcac 240
274 caaacacatc aaataccccc gtcaagtcaa gagctggaag cacaaagcat agtatgtaca 300
275 agataccctt ggaaatcttt cccgaagttc accttgtggt ggacagcaca tttgccaaag 360
276 cttttaaatt tgacgtgtac aaagtaacgc gttacttcgc agtgcttaca aatgcggcta 420
277 atcttaggta tgccagcttc gtatttccaa aagtacagct caggat           466
280 <210> SEQ ID NO: 16
281 <211> LENGTH: 377
282 <212> TYPE: DNA
283 <213> ORGANISM: Ixodes ricinus
285 <400> SEQUENCE: 16
286 ctcgtccaca cattctccta aaatgcaagc cttttttttc ccacaaggtg taccgtcgac 60
287 tacactgagt ctccaataaa tatgttttcc ggtgcaattt accttgcagt ctttgacgcc 120
288 gtatgtaggg tcagcgtgca tgccttcgtc gtacatatac accctctgac agtagttgct 180
289 cagtgttgtc atcctaccag gaagcttaga cgaacgtttt attgtttttg tcgtgtatcg 240
290 ttctctaagg catttgaatt ccggacggtt gtagaggttc ctgacttctc gctggcagca 300
291 ataagagaac tgatactggc gctcgtcttg catcttgtaa ctcatgaggt atccgtcatc 360
292 ccatgggcag tccgcag                                               377
295 <210> SEQ ID NO: 17
296 <211> LENGTH: 1670
297 <212> TYPE: DNA
298 <213> ORGANISM: Ixodes ricinus
300 <220> FEATURE:
301 <221> NAME/KEY: CDS
302 <222> LOCATION: (54)..(1517)
304 <400> SEQUENCE: 17
305 aaggaagaag ttaggcgtag gctttgggaa accggtcatc ctcgaaacca gag atg      56
306                                                               Met
307                                                                 1
309 tcg gga ctc agc ctg aaa ttg tgg att gta gcg ttc ttt tct ttc tgc    104
310 Ser Gly Leu Ser Leu Lys Leu Trp Ile Val Ala Phe Phe Ser Phe Cys
311                 5                10                15
313 ttg gcc gag aaa gag cat ggg atc gtg tac ccc agg atg ctt gaa agc    152
314 Leu Ala Glu Lys Glu His Gly Ile Val Tyr Pro Arg Met Leu Glu Ser
315             20                25                30
317 aga gca gca act gga gag aga atg ctt aaa atc aac gat gac ctg acg    200
318 Arg Ala Ala Thr Gly Glu Arg Met Leu Lys Ile Asn Asp Asp Leu Thr
319         35                40                45
321 ttg acg ctg cag aag agt aag gtc ttc gct gac gac ttt ctc ttc agc    248
```

Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

VERIFICATION SUMMARY   DATE: 08/01/2001
PATENT APPLICATION: **US/09/910,430**   TIME: 14:52:44

Input Set : **A:\VANM229-001CP1seq.txt**
Output Set: **N:\CRF3\08012001\I910430.raw**

```
L:13 M:270 C: Current Application Number differs, Replaced Application Number
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:49 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:54 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:244 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:564 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:565 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:589 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:875 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30
```